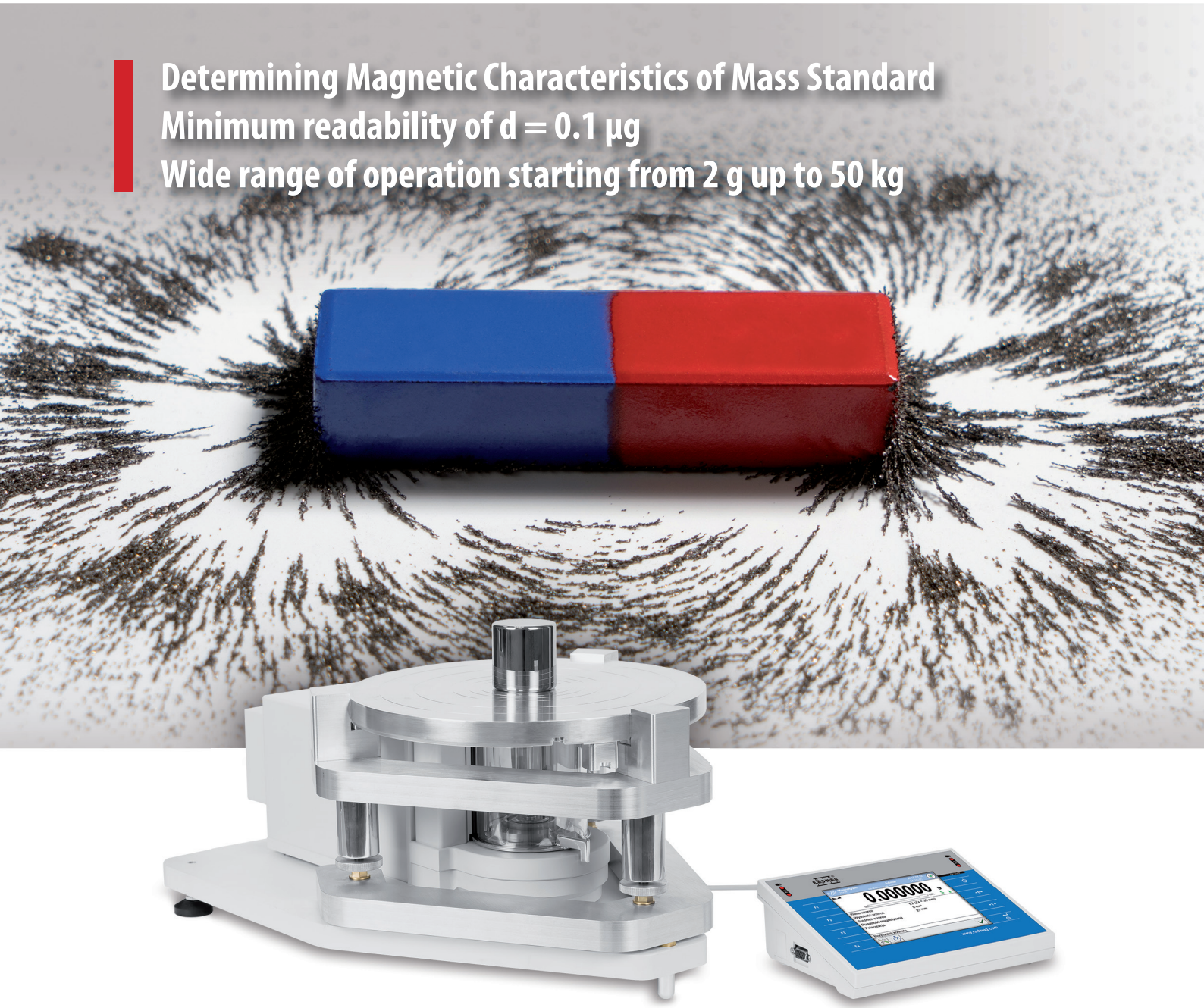
RADWAG BALANCES AND SCALES
ADVANCED WEIGHING TECHNOLOGIES

Determining Magnetic Characteristics of Mass Standard
Minimum readability of d = 0.1 µg
Wide range of operation starting from 2 g up to 50 kg



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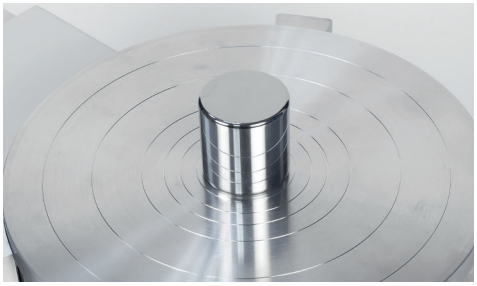
SM Susceptometer

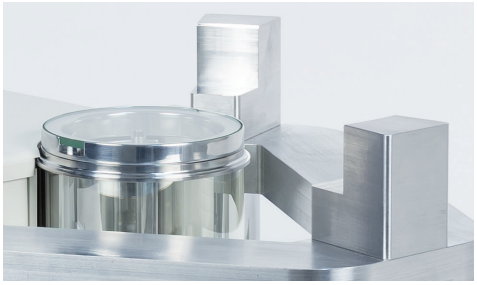
DETERMINATION OF MAGNETIC CHARACTERISTICS

SM Determining magnetism of mass standards in accordance with OIML R111

A top-class magnet guarantees repeatability.



Specially-designed weighing pan facilitating centring of the mass standard.



Modular construction enables determination of magnetic characteristics of mass standards and carrying out comparison procedure.

Conformity with OIML R111 standard

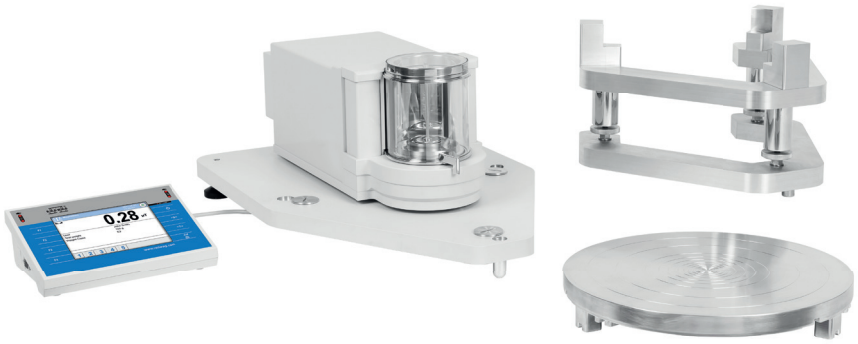
Publication of the OIML R111 standard in 2004 made it necessary to determine magnetic characteristics of mass standards. There are different methods for determining mass standards' magnetic characteristics. The susceptometer method is recommended for small mass standards ranging from 1 g to 50 kg. Knowing the properties of permanent magnet located on the weighing pan, the geometry of the test mass standard and the constant known distance between the magnet and the standard, you can calculate mass standard's magnetic characteristics.

Determination of magnetic susceptibility and residual magnetism

RADWAG-designed SM susceptometer enables determination of magnetic characteristics of mass standards of the following classes: E1, E2, F1 and F2. The software automatically verifies the compliance of the measurement result with the OIML R111. The device features 3 different heights, from the mass standard base to the centre of the magnet. The recommended distance between the mass standard and the magnet depends on the mass standard's class. The measurement result is magnetic susceptibility and polarisation, i.e. residual magnetism.

Modular construction

Modular design, upon disassembling a respective module, enables using the susceptometer as a mass comparator or a balance.



	SM-UYA-5.4Y.KO	SM-UYA-3.4Y	SM-MYA-5.4Y	SM-MYA-11.4Y
Measurement in accordance with OIML R111	Class E1, E2, F1 and F2	Class E1, E2, F1 and F2	Class E1, E2, F1 and F2	Class E1, E2, F1 and F2
Maximum capacity [Max]	50 kg	50 kg	50 kg	50 kg
Readability [d]	0.1 µg	0.1 µg	1 µg	1 µg
Range	2 g – 50 kg	2 g – 50 kg	2 g – 50 kg	2 g – 50 kg
Dipole moment of magnets	≤ 0,1 Am^2	≤ 0,1 Am^2	≤ 0,1 Am^2	≤ 0,1 Am^2
Platform - magnet centre distance	20 mm, 27 mm, 43 mm	20 mm, 27 mm, 43 mm	20 mm, 27 mm, 43 mm	20 mm, 27 mm, 43 mm
Magnetizing field strength	2000 A/m, 800 A/m, 200 A/m	2000 A/m, 800 A/m, 200 A/m	2000 A/m, 800 A/m, 200 A/m	2000 A/m, 800 A/m, 200 A/m
Stabilization time	10 s	10 s	10 s	10 s
Adjustment	Internal	Internal	Internal	Internal
Platform diameter	ø300 mm	ø300 mm	ø300 mm	ø300 mm
Communication interfaces	2×USB-A, 2×RS232, Ethernet, 4×IN, 4×OUT, Wireless Connection	2×USB-A, 2×RS232, Ethernet, 4×IN, 4×OUT, Wireless Connection	2×USB-A, 2×RS232, Ethernet, 4×IN, 4×OUT, Wireless Connection	2×USB-A, 2×RS232, Ethernet, 4×IN, 4×OUT, Wireless Connection